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# **The Illinois Beef Performance Testing Program**

## **A Management Tool That Can Help Improve Herd Productivity**

**G. E. Ricketts   T. R. Carr**



**College of Agriculture   Cooperative Extension Service   Circular 1159**  
**University of Illinois at Urbana-Champaign**



**T**HE ILLINOIS BEEF PERFORMANCE TESTING PROGRAM, initiated in 1955, has been updated periodically to keep it a useful tool for cattlemen to use as part of their overall management program. The Illinois BPT program is conducted jointly by county extension advisers, area livestock advisers, and extension livestock specialists in the Department of Animal Science, University of Illinois at Urbana-Champaign. The Illinois Beef Improvement Federation serves in an advisory capacity and helps keep the program up-to-date.

Almost all of the purebred beef registry associations have a performance testing program. Breeders of purebred cattle are urged to participate in their association's program. Cooperative Extension Service personnel will be happy to help obtain records for such programs.

Facilities are available at Urbana to process all records from commercial as well as purebred herds. A modest fee is charged for this service. If the records are processed at Urbana, the herd owner will be furnished with an extra copy, upon request, that can be forwarded to the breed association office. Or, if preferred, all of the processing may be done at the breed association office. Where the records are processed will in no way affect the cooperation the herd owner will receive from Extension Service personnel.

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**H**ERD IMPROVEMENT should be one of the major objectives of all commercial and purebred cattlemen. Such factors as increasing the weaning and yearling weights and improving the quality of the calves produced should be of major concern. A sound breeding, management, and selection program is needed for any improvement, and this is where accurate records come into play.

Properly kept production records can be very useful to:

- Measure herd productivity.
- Evaluate bull performance.
- Identify high-producing cows and cull low-producing cows.
- Indicate differences in the gaining ability of calves.
- Select herd replacements.
- Provide permanent, yearly records.
- Supplement what can be seen with the naked eye and retained in one's memory.

Combining production records, visual appraisal, and pedigree information will help give a fairly complete evaluation of an animal.

The major production factors emphasized in the performance testing program are medium to high in heritability. The heritability of a particular trait indicates how rapidly improvement can be made through selection for that trait. Heritability estimates of less than 20 percent are usually considered low; those from 20 to 40 percent are medium; and those above 40 percent are high.

**Heritability Estimates (Percentages) for Beef Cattle**

Calving interval	10	Conformation (grade)	
Weaning weight	30	Weaning	25
Gain efficiency	40	Slaughter	40
Maternal ability	40		
Feedlot gain	45	Carcass (characteristics)	
Birth weight	40	Carcass grade	40
Final feedlot weight	60	Fat thickness	45
Susceptibility to cancer eye	30	Rib-eye area	70

## PURPOSES OF THE ILLINOIS BPT PROGRAM

The primary purpose of this program is to provide information that will be valuable to cooperators in selecting and culling their cattle, and in improving the production of their cow herds. The program is not a game or a contest; very simply, it is a management tool for cattlemen. Major emphasis is given to:

- Beef cow performance, as evidenced by the weaning weight of calves and evaluation scores at weaning.
- Post-weaning performance of calves.

- Carcass quality at slaughter.
- Herd sire evaluation.

Because all of the characteristics measured in the performance testing program are of medium or high heritability, real progress can be made in improving these characteristics if a good selection program is followed.

## HOW THE PERFORMANCE TESTING PROGRAM OPERATES

The responsibilities of the herd owner include the following:

1. Contact your extension adviser at least a month before you plan to wean your calves to set up a date for weighing and evaluating them. Also, contact him several weeks before your post-weaning tests will be completed. All of the needed record forms can be obtained free from the extension adviser's office.

*Herd owners may weigh and evaluate their own cattle, but they must code in on the Calf Crop Record Work Sheet who did the weighing.* Evaluation is an optional, not mandatory, part of the program. However, new participants in the program are encouraged to have extension personnel help get them started.

2. Be sure the calves are at least 160 days of age but not more than 250 days old when they are weighed for their weaning record. This is necessary for calculating the official 205-day adjusted weight.

3. Make sure each cow, herd sire, and calf is identified by some positive means.

4. Keep an accurate calving record, including the calf's identification, birth date, dam, sire, and sex.

5. Weigh and evaluate all calves that are old enough, not just a few of the best ones.

6. Arrange for scales and facilities to weigh the cattle accurately.

7. Fill out the Calf Crop Record Work Sheet, the Post-Weaning Record Work Sheet, or both before the day the cattle are to be weighed. Complete all of the columns except those for the actual weight and evaluation scores. New cooperators who are filling out the Calf Crop Record Work Sheet for the first time should leave blank the space marked "Herd Code."

8. Be certain that the cattle are at least 330 days old and that they have been on test at least 140 days when the Post-Weaning Record Work Sheet is completed. This is required to calculate the official 365-day adjusted weight.

9. Pay the processing fee for each animal included on the Calf Crop Record Work Sheets and the Post-Weaning Record Work Sheets. Make checks payable to the University of Illinois.

The responsibilities of the county extension adviser are as follows:

1. Keep a complete file and a good supply of BPT materials in the office, including current copies of the following items:

- Circular on the Illinois BPT Program.
- Calf Crop Record Work Sheet.
- Post-Weaning Record Work Sheet.
- Weighing and Evaluation Work Sheet.
- Outline of the Seven Body Types.
- Breed Codes.
- Carcass Quality Work Sheet.
- Individual Cow Performance Record.
- Sire Evaluation Record.
- Bull Code Number Record.
- Cow Code Number Record.

2. Explain the program to prospective cooperators in the county, and help cooperators evaluate their records.

3. Arrange with the cooperator for a date on which to weigh his calves or yearlings, or both, if he wants your assistance. Also make arrangements for an individual or individuals to evaluate the cattle if the cooperator so desires.

4. Check the completed Calf Crop Record Work Sheets and the Post-Weaning Record Work Sheets to be sure all of the information needed is shown, then send these work sheets to the Livestock Extension Specialists' Office — 326 Mumford Hall, Urbana, IL 61801. Collect the processing fee and send it along with the completed work sheets. As noted before, all checks must be made payable to the University of Illinois.

The responsibilities of the area livestock adviser are to:

1. Conduct meetings and conferences to acquaint breeders with the Illinois BPT Program and to help cooperators evaluate their records.

2. Help weigh and evaluate cattle and help assemble records. The latter is particularly useful to those whose herds are just starting in the program.

3. Make summaries of records for your area when it seems useful to do so.

4. Keep a good supply of all record forms on hand.

The responsibilities of the state livestock specialists include the following:

1. Conduct meetings and conferences to acquaint breeders with the Illinois BPT Program and to help cooperators evaluate their records.

2. Help weigh and evaluate cattle, when possible; also, help assemble records.

3. Furnish the record forms and other BPT materials.

4. Update the Illinois BPT Program whenever necessary and keep all cooperators and appropriate Extension Service personnel informed about changes in the program.

5. Supervise the record-processing at Urbana and see that the herd owner, county extension adviser, and area livestock adviser receive copies of the processed records.

6. Maintain a file containing a copy of the processed records of all of the cooperators in the Illinois Beef Performance Testing Program.

7. Make summaries of data on a routine basis.

8. Send a quarterly information letter about the program to each of the cooperating herd owners and to all appropriate Extension Service personnel.

## WEANING-TIME PHASE

This is the first part of the Illinois BPT Program.

1. **The herd owner needs to fill out the Calf Crop Record Work Sheet before the day the calves are to be weighed and evaluated by extension personnel.** A sample of this form is shown on page 13. All columns except those for the actual weight and evaluation scores are to be completed.

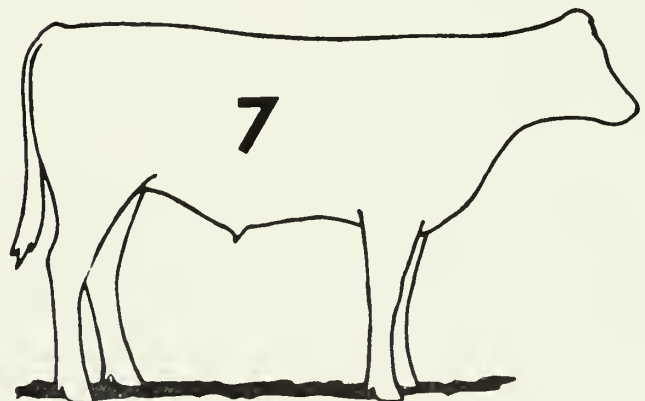
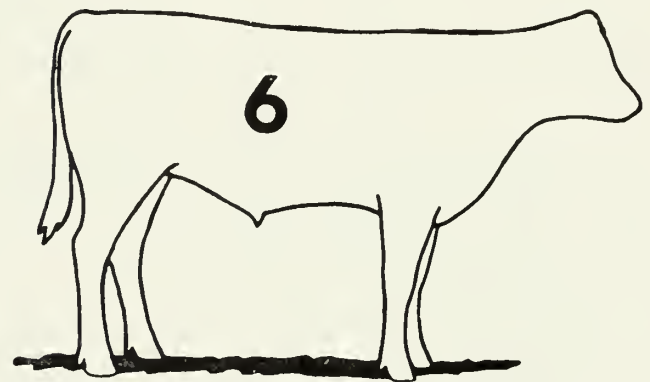
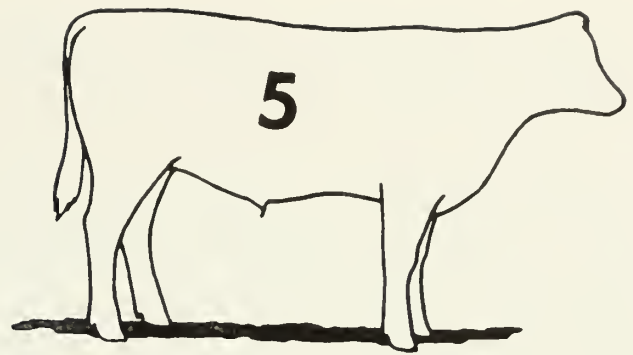
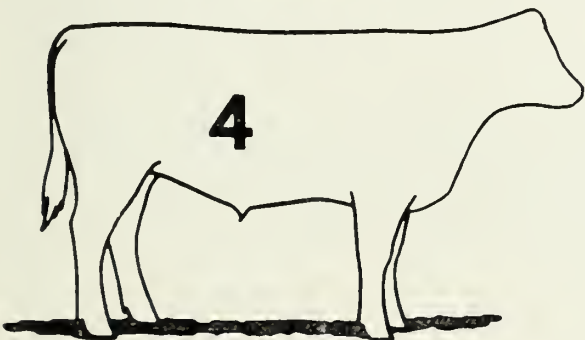
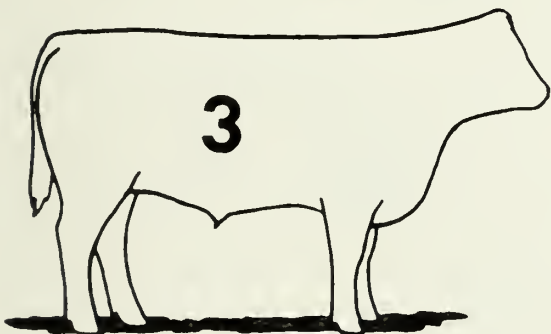
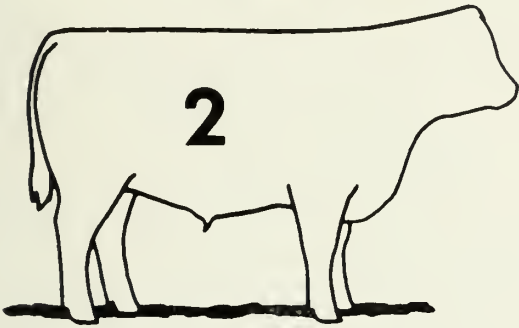
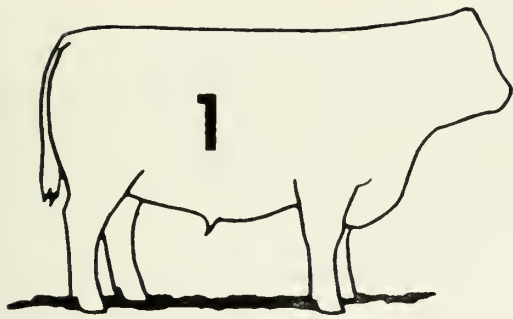
2. **At weaning, each calf must be weighed separately and the weight recorded on the Weighing and Evaluation Work Sheet (see page 12) or the Calf Crop Record Work Sheet (see page 13).** Calves should be weighed at about 7 months of age. Calves weighed for their weaning record when they are 160 to 250 days old are considered regular and will have 205-day weights and weight ratios calculated for them. The 160- to 250-day age span is recommended by the National Beef Improvement Federation.

Calves weighed when they are 120 to 159 days or 251 to 290 days old are considered irregular. They will have 205-day weights calculated but no weight ratios. For calves weighed at under 120 days or over 290 days old, the raw data will be printed out but no weight calculations will be made. The 205-day weights for irregular calves will be marked with an asterisk.

*Sire summaries, sex summaries, and herd averages will include regular calves only.*

3. **If the calves are to be evaluated, it should be done when they are weighed or soon afterwards, if possible.** An individual or a committee can do the evaluating. Evaluators can mark their scores on separate Weighing and Evaluation Work Sheets, or one person can accumulate the scores and write down the average (to the nearest whole number).





These outlines represent the seven frame scores being used in the Illinois Beef Performance Testing Program. They were developed at the University of Wisconsin to represent the range in body types of cattle involved in their body type research projects. In general, cattle of the English breeds will be covered by body types 1 through 5. The largest Charolais cattle or similar size cattle of other breeds will require the use of body types 6 and 7.

*Frame score.* The frame scores are made on a 1 through 7 scale (see figure). These scores apply across the cattle industry, not just within each breed. As a general rule, most animals of the English breeds will be in the 1 to 5 range. For Charolais, Simmentals, and other breeds of similar size, the scores will usually range from 3 to 7.

Remember that age must be taken into consideration in determining a frame score. Instead of just making an eyeball appraisal to determine a frame score, many producers are following the Missouri system and using a height measurement at the shoulder.

*Muscle score.* This evaluation also uses a 1 through 7 scale and is applied as shown on next page:

- |   |                       |
|---|-----------------------|
| 1 An exceptionally thin calf<br>(a walking skeleton). | 4 Average muscling.   |
| 2 Very light muscled.                                 | 5 Heavy muscled.      |
| 3 Light muscled.                                      | 6 Very heavy muscled. |
|   | 7 Double muscled.     |

*Conformation score.* A conformation score has replaced the old feeder calf grade. However, the same numerical range, 1 through 17, is used and is based upon a total evaluation of the animal. The following descriptions of scoring are not lengthy and should be helpful to you in understanding the current conformation scoring system.

Score	Description
17 16 15	<b>Superior.</b> Growthy, well balanced, well muscled, and an adequate frame. These animals are also structurally sound, have adequate bone, and are very acceptable in breed and sex character.
14 13 12	<b>Good.</b> Not strong in all characteristics like the cattle in the superior group are. May be only average or slightly below average in one or two of the characteristics mentioned above.
11 10 9	<b>Fair.</b> Below average for most of the characteristics listed for the superior cattle. Rather plain, light-muscled cattle, may have moderate to severe structural problems. Also includes cattle that are extremely short and compact and that mature very early.
8 7 6 etc.	<b>Inferior.</b> Very plain, fine boned, and very light muscled. This group may also include cattle with severe structural problems.

Consider 17-14 as sire prospects for both purebred and commercial herds. You may also occasionally want to consider a 13 that has superior performance and is structurally sound. Consider 17-13 as replacement heifers (occasionally a 12 that has superior performance and is structurally sound). However, be sure to exclude small-framed cattle even though they may have an acceptable conformation score.

4. **Miscellaneous codes.** See discussion on page 10.

5. **If the calves are evaluated, average the scores to the nearest whole number and write the scores and weights on the Calf Crop Record Work Sheet.** If all or some of the calves are not evaluated, put a 0 in the appropriate columns for the calves involved.

6. **When the Calf Crop Record Work Sheets are completed, doublecheck them for errors or missing information, then mail them to Urbana with the processing fee.**

## POST-WEANING PHASE

During the second phase of the Illinois BPT Program, weaned calves should be group-fed for at least 140 days to test their ability to gain. They do not have to be full-fed, but all of the calves in a group should receive the same ration. Thus, a group of sale or replacement bulls would probably be fed a higher-energy ration than the one fed to a group of replacement heifers.

The test period starts on the date the weaning weights are obtained. The actual weaning weight is used as the initial weight on test. Using the weaning weight as the starting weight for this test period makes it possible to account for all periods in the animal's life up to the yearling weight.

Official 365-day adjusted weights or weight ratios are calculated only for animals that are at least 330 days old when weighed off test and that have been on test at least 140 days. This is done for both regular and irregular calves. However, information from the Post-Weaning Record Work Sheet along with the average daily gain on test or weight per day of age off test is listed on the Processed Post-Weaning Record for all animals that do not meet the previous requirements.

The herd owner should fill out the Post-Weaning Record Work Sheets before the day the cattle are to be weighed off test and evaluated. All columns are to be completed except those for the off-test weight and evaluation scores. (For information about Miscellaneous Codes, see page 10.)

At the end of the post-weaning feeding period, the cattle are to be weighed and evaluated. The evaluation, which is optional, may be done by an individual or a committee.

After the evaluation scores have been averaged to the nearest whole number, transfer this information to the Post-Weaning Record Work Sheets along with the off-test weights. Your extension adviser will forward these completed work sheets to Urbana, along with your processing fee. Checks must be made payable to the University of Illinois.

## CARCASS EVALUATION PHASE

The ultimate goal of any Beef Performance Testing Program is the efficient production of lean, nutritious, highly palatable beef for the American consumer. Weaning weights, evaluation scores, and post-weaning performance may all be satisfactory, but if the carcasses of the cattle produced from your herd are wasty, light muscled, and low quality, you really haven't made much herd improvement. Carcass evaluation represents another important measure of herd performance as well as sire performance.



## BEEF CARCASS EVALUATION REPORT

U. S. DEPARTMENT OF AGRICULTURE  
CONSUMER AND MARKETING SERVICE  
LIVESTOCK DIVISION

USDA NO.	OTHER IDENTIFICATION	BREED ( <i>As supplied by owner</i> )	MEAT GRADING CERTIFICATE NO.
NAME OF PRODUCER		NAME OF PACKER	

<b>1</b>  QUALITY GRADE   BY THIRDS	<b>A. CONFORMATION, MARBLING, AND MATURITY FACTORS</b>				
	CONFORMATION	DEGREE OF MARBLING	MATURITY (APPROXIMATE AGE SHOWN) ( <i>Circle one</i> )		
			<b>A</b>	<b>B</b>	<b>C</b> <b>D</b> <b>E</b>
			( <i>Under 30 mos.</i> )	( <i>30 to 48 mos.</i> )	( <i>Over 48 mos.</i> )
<b>B. OTHER FACTORS</b>					
TEXTURE OF MARBLING ( <i>Check one</i> )					
<input type="checkbox"/> FINE <input type="checkbox"/> MEDIUM <input type="checkbox"/> COARSE					
COLOR OF LEAN ( <i>Check one</i> )					
<input type="checkbox"/> VERY LIGHT CHERRY RED <input type="checkbox"/> CHERRY RED <input type="checkbox"/> SLIGHTLY DARK RED <input type="checkbox"/> MODERATELY DARK RED <input type="checkbox"/> DARK RED <input type="checkbox"/> VERY DARK RED <input type="checkbox"/> BLACK					
FIRMNESS OF LEAN ( <i>Check one</i> )					
<input type="checkbox"/> VERY FIRM <input type="checkbox"/> FIRM <input type="checkbox"/> MODERATELY FIRM <input type="checkbox"/> SLIGHTLY SOFT <input type="checkbox"/> SOFT <input type="checkbox"/> VERY SOFT <input type="checkbox"/> EXTREMELY SOFT					
TEXTURE OF LEAN ( <i>Check one</i> )					
<input type="checkbox"/> VERY FINE <input type="checkbox"/> FINE <input type="checkbox"/> MODERATELY FINE <input type="checkbox"/> SLIGHTLY FINE <input type="checkbox"/> SLIGHTLY COARSE <input type="checkbox"/> COARSE <input type="checkbox"/> VERY COARSE					

<b>2</b>  YIELD GRADE   BY TENTHS	<b>YIELD FACTORS</b>				
	CARCASS WEIGHT ( <i>From packer's hot wt. tag</i> )	FAT THICKNESS ( <i>inches, nearest 1/10 in.</i> )	RIB EYE AREA ( <i>from Grid</i> )	KIDNEY, PELVIC AND HEART FAT ( <i>As percent of carcass weight</i> )	
	LB.	IN. ACTUAL                      ADJUSTED	SQ. IN. BY TENTHS	PCT. ESTIMATED	



(DATE)

(SIGNATURE OF GRADER)

We recommend using a progeny-testing program on the sire's first calf crop. The producer should select 8 to 12 cattle for slaughter. They should be typical of the calf crop—neither the best nor the worst. Steers should weigh at least 1,000 pounds and heifers 900 pounds. Slaughter weight will be influenced generally by breed and body type. In addition, the cattle should be fed long enough to grade choice, with yield grades of 2 or 3. No more than half of the test group should be heifers. If the necessary number of cattle are not available in your bull's first calf crop, slaughter others from his second crop.

**USDA Beef Carcass Evaluation Service.** The simplest way to obtain complete and accurate carcass data is to make use of the federal grading service. As a service to the livestock industry, the Meat Quality Division of the USDA's Food Safety and Quality Service has developed a program for certifying detailed carcass information from specific slaughter cattle. Many beef cattle producers, breed associations, agricultural experiment stations, and others interested in beef cattle improvement have asked for this type of service.

The USDA's new carcass evaluation service is based on positive identification of the live animal and of its carcass; therefore, this service is suitable for use in

sire evaluation and in other performance testing programs. As part of the carcass evaluation service, USDA meat graders will provide any of the information called for on the Beef Carcass Evaluation Report (shown above). When less-detailed information is requested, a regular grading certificate may be used.

*How to apply.* When a producer wants to use this service, he arranges to have his cattle slaughtered in a federally inspected packing plant or in a state-inspected plant that is approved to receive the federal meat-grading service. The producer obtains the packer's permission to have the carcass evaluated by a federal meat grader.

The producer and the packer decide which of them is to be billed for the cost of the evaluation service. Then, the producer requests the carcass evaluation service from the nearest field office of the USDA Meat Grading Branch (see page 8). When requesting the service, the producer tells the Meat Grading Branch office where the cattle are to be slaughtered, the factors he wishes to have certified, the number of animals involved, the date and the approximate time of slaughter, and who is to be billed for the service.

*Identifying the cattle.* The producer can identify his cattle by using metal or plastic eartags, ear tattoos,

back tags furnished by the Meat Grading Branch, or any similar identification system approved by the local meat grading supervisor. Positive identification of the carcass depends entirely upon properly identifying the animal before it is slaughtered. This requires close cooperation among the packer, the producer, and the grader concerning the date and time of slaughter. The producer must attach identification tags securely so they will not be lost while the cattle are being handled and shipped to the slaughtering plant. Back tags must be attached high on the right shoulder.

The Meat Grading Branch furnishes the producer with three copies of a form on which to list the identifying numbers for each animal. One copy is used as a check list at the time of slaughter, another copy is for the meat grader, and the remaining copy is returned to the producer with the official records.

*Maintaining identity.* In federally inspected packing plants, a federal meat inspector transfers the identity of the live animal to its carcass. In state-inspected plants, this may be done by a federal meat grader or by a meat inspector.

*Evaluating and reporting.* After the carcasses have been thoroughly chilled, the meat grader evaluates them for each of the factors requested by the producer, recording these data on the Beef Carcass Evaluation Report or on another form used by the Meat Grading Branch if the complete service is not requested. Copies are furnished to the person requesting the service.

*Cost.* Charges for the carcass evaluation service are made at the regular rate for grading meat, plus any expenses incurred for travel or for transferring the identification of the live animal to the carcass.

*USDA Meat Grading Branch field offices.* There is only one of these offices in Illinois. The address is Room 203, 4101 South Halsted Street, Chicago 60609 (telephone 312/353-5751). Two other field offices are located at 225 Livestock Exchange Building in Sioux

City, Iowa 51107 (telephone 712/862-3259), and 760 Livestock Exchange Building, Kansas City Stockyards, Kansas City, Missouri 64102 (telephone 816/758-5331).

**Carcass Data Service.** This program is a joint USDA and beef cattle industry effort to help cattle producers and feeders obtain carcass data, carcass quality, and carcass yield grade factors on important value-determining characteristics of the carcasses their cattle produce. This new service is easier to use and more readily available to a larger segment of the livestock and meat industry than the USDA's Beef Carcass Evaluation Service, which has been available to producers for several years.

Specially designed eartags are used for official identification in the program and can be purchased from one of several cooperating sources. For information on sources of eartags, write: Livestock Division, Agricultural Marketing Service, U.S. Department of Agriculture, Washington, D.C. 20250.

Producers and feeders can apply the bright orange, shield-shaped, serially numbered eartags to cattle on which they want carcass information. When eartagged cattle are slaughtered, a meat inspector will remove the tag from the ear, attach it to the carcass, and notify the USDA meat grader assigned to the plant. After the tagged carcasses have been sufficiently chilled, the meat grader will evaluate quality and yield grade factors and record the carcass data, the eartag serial number, and slaughter date on a special carcass data form (see below).

The completed data forms are forwarded to the Agricultural Marketing Services Carcass Data Center in Washington, D.C. The Carcass Data Center processes the data and mails the results to the cooperator who, in turn, sends them on to the eartag owner. The eartag owner is billed for each completed data form received. Each completed carcass data report costs \$1.50.

FORM LS-106-1 (9-4-73)								USDA - AMS Livestock Division	
CARCASS DATA SERVICE (BEEF)									
CONFOR- MATION <i>(Thirds of a grade)</i>	MATURITY <i>(Thirds of a group)</i>	MARBLING <i>(Thirds of a degree)</i>	QUALITY GRADE <i>(Thirds of a grade)</i>	PACKER'S WARM CARCASS WEIGHT <i>(Lbs.)</i>	ADJUSTED FAT THICKNESS <i>(Inches)</i>	RIBEYE AREA <i>(Sq. Inches)</i>	KIDNEY, PELVIC, & HEART FAT <i>(Percent)</i>	YIELD GRADE <i>(Tenths)</i>	EVALUATION DATE
C+	A	MT	C	594	.30	11.1	1.5	2.2	10/14/74
NAME OF ASSOCIATION OR PRODUCER							Grader Code 07	EARTAG NUMBER† 000 000	
REMARKS:									

† Duplicate eartags for different carcasses denoted by an asterisk (\*)



**Illini Beef Premiere Program.** A third possible method of obtaining carcass information is through the Illini Beef Premiere Program. The program was developed for recognition of excellence in performance and carcass merit. A few of the Premiere Program requirements are as follows:

1. Steers must be weighed between January 1 and February 15 under the supervision of a county agriculture adviser or local agriculture occupations teacher.
2. Each steer must have an ☐ or ☒ tattoo and an individual tattoo number.
3. One copy of weight certification must be sent to the county extension office or to the Vo-Ag office.
4. Each livestock producer may nominate a maximum of five steers if he plans to compete in the Open Beef Premiere Class at the Illinois State Fair. If he doesn't plan to compete, then he could weigh and tattoo the number suggested (8 through 12) for a successful progeny test.

Carcass information is obtained by University of Illinois Extension Meat Specialists with the assistance of the USDA Meat Grading Service.

## WORK SHEETS AND RECORD FORMS USED IN THE BPT PROGRAM

These are shown on the following pages. All of them can be obtained from the county extension adviser or the area livestock adviser.

**Calf Crop Record Work Sheet.** Please follow these instructions carefully when filling out this form.

*County.* This must be written in.

*Breed or breed crosses.* Write name of breed or use breed code.

*Herd code.* Be sure to list all seven numbers. If the herd is a new one in the Illinois BPT Program, leave this space blank; a herd code number will be assigned by the extension livestock specialists in Urbana.

*Month and year.* The information called for at the top of the sheet refers to the month and year in which the calves were weighed. Do not spell out the month; list it numerically — for example, 10 instead of October. For the year, list only the last two digits — 77 for 1977.

*Address.* Give your complete address, including the ZIP code.

*Calf, sire, and dam number.* The maximum is five places. Within that maximum, any combination of numbers and letters can be used, or five numbers or five letters.

*Sex code.* The code is 1 for a bull, 2 for a heifer, and 3 for a steer.

*Age of dam at calving.* This entry should be made as follows:

Two-year-olds, from one year and nine months to two years and nine months.

Three-year-olds, from two years and nine months to three years and nine months.

Four-year-olds, from three years and nine months to four years and nine months, and so on.

*Breed of sire and breed of dam.* Four digits are allowed in each column. Animals that are seven-eighths or more of a particular breed should be listed as straightbred. The breed codes currently in use are listed below. Additional breed codes will be assigned as other new breeds are used by BPT cooperators.

Examples of how to use the breed codes are as follows. The breed code for Angus is A1; for Charolais, E1. If you have a crossbred cow whose sire was a Charolais and whose dam was an Angus, her breed code would be E1A1. (The sire breed should always be listed first.) If you have a crossbred cow that is three-fourths Charolais and one-fourth Angus, she should also be coded as E1A1. If the crossbred cow is one-half Charolais, one-fourth Angus, and one-fourth Simmental, her breed code would be E1XX. In this last case, the XX represents the two lowest percentages of breeds in a three-breed cross.

### Breed Codes

A1 Angus	E1 Charolais
A2 Hereford	E2 Chianina
A3 Polled Hereford	E3 Romagnola
A4 Shorthorn	E4 Marchigiana
A5 Polled Shorthorn	E5 Blonde d'Acquitaine
A6 Red Angus	E6 Piedmont
A7 Red Poll	
B1 Holstein	F1 Devon
B2 Brown Swiss	F2 South Devon
B3 Guernsey	F3 Tarentaise
B4 Ayrshire	F4 Pinzgauer
B5 Jersey	F5 Lincoln Red
B6 Milking Shorthorn	F6 Salers
B7 Hays Converter	F7 Luining
B8 Beef Friesian	F8 Norwegian Red
	F9 White Park
C1 Brahman	H1 Welsh Black
C2 Brangus	H2 Galloway
C3 Beefmaster	H3 Scottish Highland
C4 Santa Gertrudis	H4 Beefalo
C5 Barzona	
D1 Simmental	K1 Murray Grey
D2 Fleckvieh	K2 Tasmanian Grey
D3 Pie Rouge	
D4 Limousin	
D5 Maine Anjou	XX Unknown, or the two
D6 Gelbvieh	lowest percentages of
D7 MRI	breeds in a three-
D8 Normande	breed cross animal

**Birth date.** Show the month, day, and year. The entry for a calf born on March 10, 1977, would be "3-10-77."

**Birth weight.** If you have birth weights, list them; otherwise, put a 0 in this column.

**Date weighed.** Again, list the month, day, and year in digital form (same as for birth date). If all of the cattle were weighed on the same day, enter the date once. It is not necessary to repeat the date for each calf.

**Actual weight.** Give this figure as of the day indicated in the previous column.

**Management code.** The following management code is currently in use:

- 0 = No creep
- 1 through 7 = Months of creep feeding, grain feeding, or both, before weighing
- F = Foster calf
- N = On a nurse cow
- T = Twin
- K = Twin and on a nurse cow

For months of creep feeding, what is important is how long the calves have actually been eating feed, not just how long the creep feeder has been in the field.

The management code space allows for only one digit. So if you have, for example, a twin calf that has been on creep two months, use just T, not T2. Calves with a management code of F, N, T, or K will not have any weight ratios calculated, and none of their performance data will be included in sex summaries, sire summaries, or herd averages.

**Weight by.** This refers to who supervised the weighing of the calves. The codes are as follows: 1 = University, 2 = Owner, 3 = Other.

**Evaluation scores.** These scores should be averaged to the nearest whole number. If the calves were not evaluated, put a 0 in the appropriate column or columns.

**Miscellaneous codes.** Four columns are provided for you if you wish to record additional information that will be helpful to you in evaluating your animals. *The information you list must be coded numerically, but you can develop your own coding system.* The following are examples of some of the additional items you may want to keep track of:

- Cow weight at weaning
- Ease of calving
- Vigor of calf at birth
- Height at shoulders
- Incidence of disease
- Structural correctness
- Horned, polled, or scurred
- Temperament
- Condition

Proportion of a breed (such as 12, 34, and 78 for  $\frac{1}{2}$ ,  $\frac{3}{4}$ , and  $\frac{7}{8}$ )

Be sure to put a 0 in the miscellaneous columns you don't use.

**Calf Crop Record** (page 16). This is the processed record you receive, calculated from the information you have submitted on the Calf Crop Record Work Sheet. The calculations made include the following:

- Age in days
- 205-day weight, adjusted for age of dam
- 205-day weight ratio within sex
- 205-day adjusted weight
- 205-day adjusted weight ratio

- Sire summary within each sex group
- Sex group summary
- Overall sire summary
- Overall herd average

**Individual Cow Performance Record** (page 18). This provides a lifetime performance record for each cow in the herd. The information on the Calf Crop Record is transferred by the herd owner to the Individual Cow Performance Record Sheet. After a herd has been on test for a few years, a study of these record sheets will show which cows are consistently among the top performers in the herd. Note: This form is available free at your county extension office.

**Post-Weaning Record Work Sheet.** Follow the guidelines for filling out the Calf Crop Record Work Sheet. Much of the information can be taken directly from the processed Calf Crop Record. Additional instructions for completing this form are as follows:

**Date on test.** This is the date the calves were weighed for their weaning record.

**Weight on test.** This is the weight that was taken for the weaning record on the date given.

**205-day weight, adjusted for age of dam.** This is taken from the processed Calf Crop Record. Do not confuse it with the 205-day adjusted weight.

**Miscellaneous codes.** Some of the items used in the miscellaneous columns on the Calf Crop Record Work Sheet (page 13) can also be used on this form. An additional item to consider is a measurement of testicle size of yearling bulls.

**Post-Weaning Record** (page 22). It shows the performance data on your cattle from weaning time until approximately one year of age. This record is very useful in selecting bulls and heifers for herd replacements and for sale. Remember that yearling weight and post-weaning average daily gain have a high heritability. The entries made on this record are calculated from the information you submit on the Post-Weaning Record Work Sheet. The calculations made include:



Age on test  
 Age off test  
 Days on test  
 Average daily gain on test  
 Weight per day of age off test  
 365-day adjusted weight  
 365-day adjusted weight ratio within sex  
 Sire summary within each sex group  
 Sex group summary

**Sire Evaluation Record** (page 23). If kept up-to-date, this form will show a lifetime record for each bull in the herd. That information will be useful in comparing the weaning and post-weaning records of the progeny from each bull in the herd. Note: This form is available free at your county extension office.

**Carcass Quality Record** (page 24). The herd owner can transfer the official carcass evaluation data to this form so that additional calculations can be made. The Carcass Quality Record is a valuable supplement to the Calf Crop Record and the Post-Weaning Record. Note: This form is available free at your county extension office.

## HOW WEIGHTS AND WEIGHT RATIOS ARE CALCULATED

**Calf Crop Record.** The computer program for processing the weaning records adjusts the weaning weight for the age of the calf, the age of the dam, and the sex of the calf. The 205-day age basis and the adjustment factors used are those recommended by the National Beef Improvement Federation. These have been adopted by most states and breed associations.

*Regular and irregular calves.* Calves weighed for their weaning record when they are 160 to 250 days old are considered regular; they have 205-day weights and weight ratios calculated for them. Regular calves with a management code of F, N, T, or K, however, do not have weight ratios calculated.

Calves weighed when they are from 120 to 159 days old and from 251 to 290 days old are considered irregular and have 205-day weights calculated for them but no weight ratios. For calves under 120 days old or over 290 old when weighed, the raw data are printed out but no weight calculations are made.

None of the performance data for irregular calves or for regular calves with management codes of F, N, T, or K are included in sex group summaries, sire summaries, or herd averages.

*205-day weight, adjusted for age of dam.* Weights of all calves are corrected to a 205-day age basis by figuring an average daily gain from birth to the date weighed. To do this, an assumed birth weight of 70

pounds or the actual birth weight (if available) is used. All 205-day weights are then adjusted to a mature-cow basis as follows:

Age of dam (yr.)	Male calves (lb.)	Female calves (lb.)
2	+60	+54
3	+40	+36
4	+20	+18
5 to 10	+ 0	+ 0
11 +	+20	+18

*205-day weight ratio within sex.* The weight ratio is a simple percentage. The 205-day weight (adjusted for age of dam only) for each regular-age calf is divided by the average of its own sex group and expressed as a percentage. This provides an automatic way to evaluate calves on a weight basis. For example, if a heifer calf in your herd has an 85 in this column, her 205-day weight, adjusted for age of dam, is 15 percent (100 — 85) below the average weight for all the heifers in the herd. Similarly, a heifer with a weight ratio of 115 would be 15 percent above the average.

*205-day adjusted weight.* To obtain this figure, the 205-day weight is adjusted for both sex of the calf and age of dam. The weights of all calves are adjusted to a steer basis by adding 5 percent to a heifer calf's weight and subtracting 5 percent from a bull calf's weight (205-day weight, adjusted for age of dam).

*205-day adjusted weight ratio.* This percentage is obtained by dividing the 205-day weight for each regular-age calf by the average 205-day adjusted weight of all regular-age calves in the herd (herd average). This allows comparison of all calves on an equal sex basis. Also, the herd owner can compare each cow's production with the herd average.

For example, an 80 in this column would mean that this calf's 205-day adjusted weight was 20 percent (100 — 80) below the average of all calves in the herd; moreover, the production of this calf's mother was also 20 percent below the herd average. Anything above 100 in this column indicates cows and their calves that are above the herd average.

*To evaluate or compare individual cow productivity, use the 205-day adjusted weight and weight ratio. To compare an individual calf's performance within its own sex group, use the 205-day weight adjusted for age of dam and the 205-day weight ratio within sex.*

To help you better evaluate the bulls in your herd, a sire average is calculated for each sex group, and an overall sire average is given just before the herd average. Separate sex averages are also given for all your bull calves, heifer calves, and steer calves.

## WEIGHING AND EVALUATION WORK SHEET

## Illinois Beef Performance Testing Program

Owner John Doe County Adams

Date 10-19-77 Evaluator Bob Green

	<b>Frame score</b>	<b>Muscling score</b>	<b>Conformation score</b>
<b>Sex code</b>	1 = (very short & dumpy)	1 = exceptionally thin calf (walking skeleton)	Superior—17, 16, 15
1 = bull	2	2 = very light muscled	Good—14, 13, 12
2 = heifer	3	3 = light muscled	Fair—11, 10, 9
3 = steer	4	4 = average muscling	Inferior—8, 7, 6, and below
	5	5 = heavy muscled	
	6	6 = very heavy muscled	
	7 = (very large framed)	7 = double muscled	

[illegible]

This work sheet is used to record the weights and evaluation scores of calves at weaning time or of cattle completing a Post-Weaning Record.

<sup>1</sup>See Guidelines For Conformation Scoring, on the reverse.

<sup>2</sup>Weighed by (1) university, (2) owner, (3) other.



# CALF CROP RECORD WORK SHEET

Illinois Beef Performance Testing Program

Breed or breed crosses A3

County Adams

Herd Code 001-0001

Month 10 8-9

Year 77 10-11

Owner John Doe

Street or Rural Route RR #1

City Deerfield, Illinois State IL Zip Code 60015

Calf no. 12-16	Sex code 17	Sire no. 18-22	Dam no. 23-27	Age of dam 28-29	Breed of sire 30-33	Breed of dam 34-37	Birth date			Birth wt. 44-46	Date weighed			Actual wt. 53-56	Mgt. code 57	Wt. by score 58	Frame score 59	Mus. cling score 60	Conf. score 61-62	Miscellaneous codes			
							Mo.	Day	Yr.		Mo.	Day	Yr.							A	B	C	D
73	1	371	37	4	A3	A3	3	1	77	82	10	19	77	610	3	1	4	5	15	9	9	9	9
74	2		342	3	A2	A2		2		110				540	0		4	4	16				
75	1		44	3	A3	A3		4		80				565	3		4	3	12				
76	1	046	3876	3				9		60				545			2	5	12				
77	1	371	232	4				10		94				535			3	4	13				
78	2	371	612	11	A2	A2		11		82				525			4	4	14				
79	2	046	3290	3	A3	A3		13		84				470			3	3	11				
79	2	046	3048	3	A3	A3		14		84				425	0		2	4	12				
710	1	371	235	4	A2	A2		21		80				580	3		4	5	15				
711	2	046	3051	3	A3	A3		21		88				445			3	5	13				
712	1	371	32	4	A2	A2		23		98				480			3	5	14				

This form, when completed, is sent to the UI Livestock Extension Specialists at Urbana-Champaign. It provides the information necessary to produce the processed Calf Crop Record.

Management Code: 0 = No creep feeding; 1-7 = Months of creep feeding and/or grain feeding prior to weighing; F = Foster calf; N = Nurse cow; T = Twin; K = Twin and on a nurse cow.

Sex Code: (1) = bull, (2) = heifer, (3) = steer, Weighed by: (1) University, (2) Owner, (3) Other

# BULL CODE NUMBER RECORD

## Illinois Beef Performance Testing Program

Code no.	Bull's name, tattoo, or registration number	Code no.	Bull's name, tattoo, or registration number
1		28	
2		29	
3		30	
4		31	
5		32	
6		33	
7		34	
8		35	
9		36	
10		37	
11		38	
12		39	
13		40	
14		41	
15		42	
16		43	
17		44	
18		45	
19		46	
20		47	
21		48	
22		49	
23	Use this sheet if you identify your bulls by a name or number larger than five places. The number in the box is the number you list on the Calf Crop Record Work Sheet in the sire column. List your bulls on this sheet and keep it with your permanent herd records. Report each bull by the same number each year.		
24			
25		52	
26		53	
27		54	



# COW CODE NUMBER RECORD

## Illinois Beef Performance Testing Program

Code no.	Cow's name, tattoo, or registration number	Code no.	Cow's name, tattoo, or registration number
1		28	
2		29	
3		30	
4		31	
5		32	
6		33	
7		34	
8		35	
9		36	
10		37	
11		38	
12		39	
13		40	
14		41	
15		42	
16		43	
17		44	
18		45	
19		46	
20		47	
21		48	
22		49	
23	Use this sheet if you identify your cows by a name or number larger than five places. The number in the box is the number you put under "dam" in the Calf Crop Record Work Sheet. List all your cows on this sheet and keep it with your permanent herd records. Be sure each cow is reported by the same number each year.		
24			
25			
26		52	
27		53	
		54	

HERD CODE NO.

COUNTY

# ILLINOIS B. P. T. PROGRAM - Calf Crop Record

001-0001

John Doe

Doeville, IL 66643

Adams

Calf Number	Sex	Sire Number	Dam Number	Age of Dam	Breed of Sire	Breed of Dam	Birth Date	Birth Weight	Date Weighed	Age in Days	Actual Weight	Calf Comparison			Cow Comparison			Frame Score	Muscle Score	Conf. Score	Miscellaneous Codes		
												205 Day Wt. Adj. for Age & Sex	205 Day Wt. Adj. for Age & Sex	205 Day Wt. Adj. for Age & Sex	205 Day Wt. Adj. for Age & Sex	205 Day Wt. Adj. for Age & Sex	205 Day Wt. Adj. for Age & Sex				205 Day Wt. Adj. for Age & Sex	A	B
724	1	ADV	335	03	A3	A3	4-18-77	103	10-19-77	184	545	635	118	603	121	2	1	5	5	16	0	0	0
		SIRE	ADV	AVERAGE	FOR SEX 1	FOR SEX 1		103		184	545	635	118	603	121			5.05	016.0	0	0	0	0
76	1	046	3876	03	A3	A3	3-09-77	60	10-19-77	224	545	544	101	517	104	3	1	2	5	12	0	0	0
		SIRE	046	AVERAGE	FOR SEX 1	FOR SEX 1		60		224	545	544	101	517	104			2.05	012.0	0	0	0	0
710	1	371	235	04	A3	A2	3-21-77	80	10-19-77	212	580	583	109	554	111	3	1	4	5	15	0	0	0
712	1	371	32	04	A3	A2	3-23-77	98	10-19-77	210	480	491	91	466	94	3	1	3	5	14	0	0	0
713	1	371	307	03	A3	A3	3-24-77	95	10-19-77	209	515	547	102	520	104	3	1	3	4	12	0	0	0
719	1	371	317	04	A3	A2	4-03-77	82	10-19-77	199	430	461	86	438	88	3	1	3	3	11	0	0	0
729	1	371	228	04	A3	A3	5-04-77	94	10-19-77	168	385	469	87	446	90	2	1	3	4	13	0	0	0
73	1	371	37	04	A3	A3	3-01-77	82	10-19-77	232	610	569	106	541	109	3	1	4	5	15	0	0	0
75	1	371	44	03	A3	A3	3-04-77	80	10-19-77	229	565	554	103	526	106	3	1	4	1	12	0	0	0
77	1	371	232	04	A3	A3	3-10-77	94	10-19-77	223	535	519	97	493	99	3	1	3	4	13	0	0	0
		SIRE	371	AVERAGE	FOR SEX 1	FOR SEX 1		88		210	513	524	98	498	100			3.44	113.1	0	0	0	0
					AVERAGE	FOR SEX 1		87		209	519	537	100	510	102			3.44	313.3	0	0	0	0
711	2	046	3051	03	A3	A3	3-21-77	88	10-19-77	212	445	469	100	492	99	3	1	3	5	13	0	0	0
716	2	046	3035	03	A3	A3	3-24-77	86	10-19-77	207	420	455	97	476	96	0	1	3	3	12	0	0	0
720	2	046	3045	03	A3	A3	4-03-77	76	10-19-77	199	380	425	91	446	90	3	1	2	3	11	0	0	0
721	2	046	3799	03	A3	A3	4-03-77	68	10-19-77	199	375	420	90	441	89	0	1	2	3	10	0	0	0
727	2	046	913	08	A3	A2	4-24-77	91	11-16-77	206	380	379	61	80	80	0	1	3	3	11	0	0	0
728	2	046	220	05	A3	A3	4-26-77	90	11-16-77	204	470	472	101	496	100	2	1	3	4	14	0	0	0
79	2	046	3048	03	A3	A3	3-14-77	84	10-19-77	219	425	439	94	461	93	0	1	2	4	12	0	0	0
791	2	046	3290	03	A3	A3	3-13-77	84	10-19-77	220	470	480	103	101	101	3	1	3	3	11	0	0	0
		SIRE	046	AVERAGE	FOR SEX 2	FOR SEX 2		83		208	421	442	95	464	93			2.63	511.8	0	0	0	0

## BREED CODES

A1 - ANGUS  
A2 - HERFORD  
A3 - POLLED HERFORD  
A4 - SHORTHORN  
A5 - POLLED SHORTHORN  
A6 - RED ANGUS  
A7 - RED POLL  
B1 - HOLSTEIN  
B2 - BROWN SWISS  
B3 - GUERNSEY

## BREED CODES

B4 - AYRSHIRE  
B5 - JERSEY  
B6 - MILKING SHORTHORN  
B7 - HAYS CONVERTER  
C1 - BRAHMAN  
C2 - BRANGUS  
C3 - BEEFMASTER  
C4 - SANTA GERTRUDIS  
C5 - BARZONA  
D1 - SIMMENTAL

## BREED CODES

D2 - FLECKVIEH  
D3 - PIE ROUGE  
D4 - LIMOUSIN  
D5 - MAINE ANJOU  
D6 - GELBVIEH  
D7 - MRI  
D8 - NORMANDE  
E1 - CHAROLAIS  
E2 - CHIANINA  
E3 - ROMANGNOLA

## BREED CODES

E4 - MARCHIGIANA  
E5 - BLONDE D'ACQUITAINE  
E6 - PIEDMONT  
F1 - DEVON  
F2 - SOUTH DEVON  
F3 - TARENTAISE  
F4 - PINZGAUER  
F5 - LINCOLN RED  
F6 - SALERS  
F7 - Luing

## BREED CODES

F8 - NORWEGIAN RED  
H1 - WELSH BLACK  
H2 - GALLOWAY  
H3 - SCOTTISH HIGHLAND  
H4 - BEEFALO  
K1 - MURRAY GREY  
K2 - TASMANIAN GREY  
XX - UNKNOWN OR THE TWO  
LOWEST % BREEDS  
IN A 3 BREED CROSS ANIMAL

## MANAGEMENT CODES

0 = NO CREEP  
1-7 = MONTHS OF CREEP FED  
AND/OR GRAIN FEEDING  
PRIOR TO WEIGHING.  
F = FOSTER CALF  
N = NURSE COW  
T = TWIN  
K = TWIN AND ON A NURSE  
COW.  
1 = UNIVERSITY  
2 = OWNER  
3 = OTHER

## SEX CODES

1 = BULL  
2 = HEIFER  
3 = STEER  
WEIGHED BY  
1 = UNIVERSITY  
2 = OWNER  
3 = OTHER



## ILLINOIS B. P. T. PROGRAM - CALF CROP RECORD

001-0001

John Doe

Doeville, IL 66643

Adams

Calf Number		Sire Number	Dam Number	Age of Dam	Breed of Sire	Breed of Dam	Birth Date MO. DA. YR.	Birth Weight	Date Weighed MO. DA. YR.	Age in Days	Actual Weight	Calf Comparison 205 Day Wt. Adj. for Age of Dam		Cow Comparison 205 Day Wt. Adj. for Age of Dam		Mgt. Code	Wt. Frame Head Score	Muscle Score	Conf. Score	Miscellaneous Codes				
																				A	B	C	D	
714	2	371	48	03	A3	A3	3-24-77	72	10-19-77	209	520	548	117	575	115	3	1	4	4	15	0	0	0	0
715	2	371	343	03	A3	A3	3-25-77	82	10-19-77	208	465	495	106	520	104	0	1	3	4	13	0	0	0	0
717	2	371	231	04	A3	A2	3-30-77	88	10-19-77	203	535	557	119	585	117	3	1	4	4	14	0	0	0	0
718	2	371	245	04	A3	A2	3-30-77	65	10-19-77	203	395	416	89	437	88	0	1	2	3	12	0	0	0	0
722	2	371	440	02	A3	A3	4-12-77	82	11-16-77	218	330	369	79	387	78	2	1	2	3	10	0	0	0	0
723	2	371	310	04	A3	A2	4-15-77	74	11-16-77	215	485	484	104	508	102	0	1	3	4	14	0	0	0	0
725	2	371	451	02	A3	A3	4-22-77	82	11-16-77	208	445	494	106	519	104	2	1	3	4	14	0	0	0	0
74	2	371	342	03	A3	A2	3-02-77	110	10-19-77	231	540	528	113	554	111	0	1	4	4	16	0	0	0	0
78	2	371	612	11	A3	A2	3-11-77	82	10-19-77	222	525	509	109	534	107	3	1	4	4	14	0	0	0	0
		SIRE	371	AVERAGE	FOR SEX 2			82		213	471	489	105	513	103		3.2	3.8	13.6	0	0	0	0	0
				AVERAGE	FOR SEX 2			83		211	447	467	100	490	98		2.9	3.6	12.7	0	0	0	0	0
1		CALVES IN AVERAGE			FOR SIRE			ADV		184	545	635	118	603	121		5.0	5.0	16.0	0	0	0	0	0
9		CALVES IN AVERAGE			FOR SIRE		046	81		210	434	453	95	470	94		2.6	3.7	11.8	0	0	0	0	0
17		CALVES IN AVERAGE			FOR SIRE		371	85		212	491	505	101	506	102		3.3	3.9	13.4	0	0	0	0	0
				AVERAGE	FOR HERD			84		210	474	493	100	498	100		3.1	3.9	12.9	0	0	0	0	0

The processed Calf Crop Record is prepared by computer at the University of Illinois at Urbana-Champaign. Copies are mailed to the herd owner, the extension adviser, and the area livestock adviser. Another copy is filed at Urbana. If desired, a copy will also be sent to your national breed association office.

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A5 - POLLED SHORTHORN  
A6 - RED ANGUS  
A7 - RED POLL  
B1 - HOLSTEIN  
B2 - BROWN SWISS  
B3 - GUERNSEY

B4 - AYRSHIRE  
B5 - JERSEY  
B6 - MILKING SHORTHORN  
B7 - HAYS CONVERTER  
C1 - BRAHMAN  
C2 - BRANGUS  
C3 - BEEFMASTER  
C4 - SANTA GERTRUDIS  
C5 - BARZONA  
D1 - SIMMENTAL

D2 - FLECKVIEH  
D3 - PIE ROUGE  
D4 - LIMOUSIN  
D5 - MAINE ANJOU  
D6 - GELBVIEH  
D7 - MRI  
D8 - NORMANDE  
E1 - CHAROLAIS  
E2 - CHIANINA  
E3 - ROMANGNOLA

E4 - MARCHIGIANA  
E5 - BLONDE D'ACQUITAINE  
E6 - PIEDMONT  
F1 - DEVON  
F2 - SOUTH DEVON  
F3 - TARENTAISE  
F4 - PINZGAUER  
F5 - LINCOLN RED  
F6 - SALERS  
F7 - LUJING

F8 - NORWEGIAN RED  
H1 - WELSH BLACK  
H2 - GALLOWAY  
H3 - SCOTTISH HIGHLAND  
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AND/OR GRAIN FEEDING.  
PRIOR TO WEIGHING.  
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K = TWIN AND ON A NURSE  
COW.

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1 = BULL  
2 = HEIFER  
3 = STEER  
WEIGHED BY  
1 = UNIVERSITY  
2 = OWNER  
3 = OTHER

# INDIVIDUAL COW PERFORMANCE RECORD/ILLINOIS BEEF PERFORMANCE TESTING PROGRAM

Name Ellis Queen 21 Herd or tattoo number 4032 Birth date 3-10-73

Sire 8 Dam 64 Date at first calving 3-16-75 Age at first calving 24 months

[illegible]

## Calving and Progeny Performance Record

[illegible]

\*C \* calf, Y \* yearling

(OVER)

Sex code: 1 = bull, 2 = heifer, 3 = steer.



## INDIVIDUAL COW PERFORMANCE RECORD (continued)

[illegible]

# POST-WEANING RECORD WORK SHEET Illinois Beef Performance Testing Program

County Adams

Breed or breed crosses A3

Herd Code 001-0001

Month 4

Year 10-11

Owner John Doe

RR# 1

City Dorville

State Illinois Zip Code 66643

Calf no. 12-16	Sex code 17	Sire no. 18-22	Age of dam 23-24	Breed of sire 25-28	Breed of dam 29-32	Birth date			Date on test			Date off test			Weight on test 51-54	Weight off test 55-58	Wt.* by 59	205-day wt., adj. for age of dam 60-63	Frame score 64	Muscling score 65	Miscellaneous codes			
						Mo.	Day	Yr.	Mo.	Day	Yr.	Mo.	Day	Yr.							1	2	3	
63	1	371	2	A3	A3	3	2	76	10	19	76	3	29	77	515	1040	1	527	3	5	14	9	0	9
66		IV35				3	6								515	1010		534	4	4	14			
67		IV35				3	7								485	960		507	4	4	15			
69		371	4	A2		3	7								640	1051		609	4	5	15			
625			3			4	23								550	1030		656	4	5	14			
618	2					4	9					4	24		485	824		546	4	4	14			
619						4	11								460	770		523	4	4	14			
621					A3	4	13								432	762		498	4	3	12			
630		046	5		A3	4	30								336	636		383	2	3	11			

This form, when completed, is sent to the UI Livestock Extension Specialists at Urbana-Champaign. It provides the information necessary to produce the processed Post-Weaning Record. Most of the information needed to complete this work sheet can be obtained from the Calf Crop Record. The "on-test" weight is the actual weight at weaning time that appears on the Calf Crop Record.

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Sex code. 1 = bull, 2 = heifer, 3 = steer

\*Weighed by: (1) University, (2) Owner, (3) Other



### Post-Weaning Record.

*Weight per day of age.* This figure is obtained by dividing the weight off test by the age off test.

*365-day adjusted weight.* Regular-age calves (those that were 160 to 250 days old when weighed for their weaning record) must be on test at least 140 days and must be at least 330 days old when weighed off test to have a 365-day adjusted weight calculated. The 365-day adjusted weights for these animals will be calculated the regular way, as follows:

$$\begin{array}{c} \text{205-day weight, adjusted for age of dam} \\ \text{plus} \\ \text{(average daily gain on test} \times 160) \end{array}$$

Irregular calves that are on test at least 140 days and are at least 330 days old when weighed off test will have a 365-day adjusted weight calculated as follows:

$$\begin{array}{c} \text{(weight per day of age} \times 365) \\ \text{plus} \\ \text{adjustment, if any, for age of dam} \end{array}$$

Yearling weights calculated this way for irregular calves will be marked with an asterisk. A 365-day adjusted weight will not be calculated for animals failing to meet the minimum of 140 days on test or the minimum age of 330 days off test.

*365-day adjusted weight ratio within sex.* This figure is obtained by dividing each individual's 365-day adjusted weight by the average of its own sex group and expressing the result as a percentage. This means that the 365-day adjusted weight for each bull is compared with the average 365-day adjusted weight of all bulls on test at the same time in a given herd; the same procedure is followed for heifers and steers.

To help you with your sire evaluation, sire averages within each sex group are recorded on the processed Post-Weaning Record. Sire summaries and sex group summaries will include only those animals having 365-day adjusted weights.

### HOW TO MAKE GOOD USE OF YOUR RECORDS

Build up a history of production on each cow in the herd. You may know which cow is the best one in your herd and which is the poorest one. But do you know what cows are in the top half and in the bottom half? Use your BPT records to cull your herd and select herd replacements. Culling even first-calf heifers on the basis of that one calf is an economically sound practice. Make a list of potential herd replacements from the calves with the heaviest weaning weights and the highest evaluation scores.

Pick calves for replacements that gain the fastest

after weaning and have the heaviest weight at one year, but check the frame to make sure it is adequate for continued growth.

Look over the weaning weights, evaluation scores, post-weaning gains, and carcass quality of the calves sired by different bulls (if you use more than one).

Be prepared to supply performance records. You will find that more and more producers want cattle with such records. Good records make cattle more valuable to some people.

**Guidelines for selecting a herd sire.** One of the most important management decisions a herd owner makes is the selection of a herd sire. Careful thought and planning are required. Many herd owners still fail to realize the value of a good bull.

Select a bull that will be an asset to the herd, one that will contribute to herd improvement. Before starting out to buy a new herd sire, take some time to evaluate your cow herd and current calf crop. Where do they need improvement the most? Is it in muscling, soundness, size, gaining ability, ruggedness, or some other trait?

Next, decide what herds you plan to visit or which sales you want to attend. Buy from reputable breeders who are known to be doing a good job of production and who will supply a breeder's guarantee with the animals they sell. Patronize those who are cattle breeders in the truest sense, ones who are making real progress in improving the quality and performance of their own cattle.

Take your time in making a selection. Start out well before the time you will need a bull. The earlier you start, the greater the number of bulls from which you can make your selection. Be sure that the bull you choose has these characteristics and background:

- Large framed, with plenty of size for his age.
- Structurally correct, including the feet and the legs.
- Performance tested, with a good 205-day weight (adjusted for age of dam) and a good 365-day adjusted weight.
- Well muscled.
- From a cow that consistently ranks in the top half of the herd in terms of production.
- From a sire that has been doing a good job of settling cows and of siring large-framed, fast-gaining calves.
- Normal in testicular development — both testicles are present and they are fully descended, sound, and approximately equal in size.
- Free of reproductive diseases, as determined by blood tests and verified by health papers.

HERD CODE NO COUNTY POST-WEANING RECORD

001-0001 John Doe Adams Doeville, IL 66643

Calf Number	Sex	Sire Number	Breed of Sire	Breed of Dam	Birth Date Mo Day Yr	Date on Test Mo Day Yr	Age on Test	Date Off Test Mo Day Yr	Days on Test	Weight on Test	Weight Off Test	Age Off Test	Average Daily Gain on Test	Weight per Day of Age	205 Day Adjusted Weight for Age of Dam	365 Day Adjusted Weight	365 Day Adjusted Weight Ratio within Sex	WT By	Frame Score	Muscle Score	Conform Score	Miscellaneous Codes		
																						1	2	3
66	1	IV35	A3	A3	3-06-76	10-19-76	227	3-29-77	161	541	1010	388	3.07	2.60	534	1025	98	1	4	4	14	0	0	0
67	1	IV35	A3	A3	3-07-76	10-19-76	226	3-29-77	161	485	960	387	2.95	2.48	507	979	94	1	4	4	15	0	0	0
625	1	SIRE	IV35 AVERAGE FOR SEX 1				227		161	500	985	388	3.01	2.54	521	1002	96		4.0	4.0	14.0	0.0	0	0
		371	A3	A2	4-23-76	10-19-76	179	3-29-77	161	550	1030	340	2.98	3.03	656	1133	108	1	4	5	14	0	0	0
63	1	371	A3	A3	3-02-76	10-19-76	231	3-29-77	161	515	1040	392	3.26	2.65	527	1049	100	1	3	5	14	0	0	0
69	1	371	A3	A2	3-07-76	10-19-76	226	3-29-77	161	640	1085	387	2.76	2.80	609	1051	100	1	4	5	15	0	0	0
		SIRE	371 AVERAGE FOR SEX 1				212		161	568	1052	373	3.00	2.83	597	1078	103		3.7	5.0	14.3	0.0	0.0	0.0
			AVERAGE FOR SEX 1				218		161	541	1025	379	3.00	2.71	567	1047	100		3.8	4.6	14.4	0.0	0.0	0.0
617	2	ADV	A3	A3	4-07-76	10-19-77	195	4-24-77	187	525	872	382	1.86	2.28	601	899	118	1	5	5	16	0	0	0
614	2	SIRE	ADV AVERAGE FOR SEX 2				195		187	525	872	382	1.86	2.28	601	899	118		5.0	5.0	16.0	0.0	0.0	0.0
		CBR	A3	A2	3-26-76	10-19-76	207	4-24-77	187	492	794	394	1.61	2.02	488	746	98	1	5	3	12	0	0	0
		SIRE	CBR AVERAGE FOR SEX 2				207		187	492	794	394	1.61	2.02	488	746	98		5.0	3.0	12.0	0.0	0.0	10.0
610	2	IV35	A3	A3	3-09-76	10-19-76	224	4-24-77	187	425	754	411	1.76	1.83	448	730	96	1	3	4	13	0	0	0
62	2	IV35	A3	A3	3-02-76	10-19-76	231	4-24-77	187	440	734	418	1.57	1.76	452	703	92	1	3	4	13	0	0	0
630	2	SIRE	IV35 AVERAGE FOR SEX 2				228		187	433	744	415	1.67	1.80	450	717	94		3.0	4.0	13.0	0.0	0.0	0.0
		046	A3	A3	4-30-76	10-19-76	172	4-24-77	187	336	636	359	1.60	1.77	383	639	84	1	2	3	11	0	0	0
		SIRE	046 AVERAGE FOR SEX 2				172		187	336	636	359	1.60	1.77	383	639	84		2.0	3.0	11.0	0.0	0.0	0.0
618	2	371	A3	A2	4-09-76	10-19-76	193	4-24-77	187	485	824	380	1.81	2.17	546	836	110	1	4	4	14	0	0	0
619	2	371	A3	A2	4-11-76	10-19-76	191	4-24-77	187	460	770	378	1.66	2.04	523	789	104	1	4	4	14	0	0	0
621	2	371	A3	A3	4-13-76	10-19-76	189	4-24-77	187	432	762	376	1.76	2.03	498	780	102	1	4	3	12	0	0	0
68	2	371	A3	A2	3-07-76	10-19-76	226	4-24-77	187	300	778	413	1.49	1.88	497	735	96	1	4	4	14	0	0	0
		SIRE	371 AVERAGE FOR SEX 2				200		187	469	784	387	1.68	2.03	516	785	103		4.0	3.8	13.5	0.0	0.0	0.0
			AVERAGE FOR SEX 2				203		187	455	769	390	1.68	1.98	493	762	100		3.8	3.8	13.2	0.0	0.0	0.0
The processed Post-Weaning Record is prepared by computer at the University of Illinois at Urbana-Champaign. Copies are mailed to the herd owner, the extension adviser, and the area livestock adviser. Another copy is filed at Urbana. If desired, a copy will also be sent to your national breed association office.																								

BREED CODES

- A1 - ANGUS

A2 - HEREFORD

A3 - POLLED HEREFORD

A4 - SHORTHORN

A5 - POLLED SHORTHORN

A6 - RED ANGUS

A7 - RED POLL

B1 - HOLSTEIN
- B2 - BROWN SWISS

B3 - GUERNSEY

B4 - Ayrshire

B5 - JERSEY

B6 - MILKING SHORTHORN

B7 - HAYS CONVERTER

C1 - BRAHMAN

C2 - BRANGUS
- C3 - BEEFMASTER

C4 - SANTA GERTRUDIS

C5 - BARZONA

D1 - SIMMENTAL

D2 - FLECKVIEH

D3 - PIE ROUGE

D4 - LIMOUSIN

D5 - MAINE ANJOU
- D6 - GELBVIEH

D7 - MRI

D8 - NORMANDE

E1 - CHAROLAIS

E2 - CHIANINA

E3 - ROMANGNOLA

E4 - MARCHIGIANA

E5 - BLONDE d'ACQUITAINE
- E6 - PIEDMONT

F1 - DEVON

F2 - SOUTH DEVON

F3 - TARENTAISE

F4 - PINZGAUER

F5 - LINCOLN RED

F6 - SALERS

F7 - Luing
- F8 - NORWEGIAN RED

H1 - WELSH BLACK

H2 - GALLOWAY

H3 - SCOTTISH HIGHLAND

H4 - BEEFALO

K1 - MURRAY GREY

K2 - TASMANIAN GREY

XX - UNKNOWN OR THE TWO LOWEST % BREEDS IN A 3 BREED CROSS ANIMAL



# SIRE EVALUATION RECORD/ILLINOIS BEEF PERFORMANCE TESTING PROGRAM

Name Illinois Herd or tattoo no. 20495 Birth date 2-27-73

Sire Mr. Progressive Dam Ellis Owen Grand 22

205-day wt. adj. for age of dam	205-day wt. ratio within sex	Frame score	Muscling score	Confor- mation score
610	115	4	5	15

Days on test	ADG on test	365-day adj. wt. ratio	WDA off test	Frame score	Muscling score	Confor- mation score
140	3.50	1170	3.20	4	5	16

Remarks

## Performance of Progeny

Year	No. of calves	Avg. 205-day adj. weight	Avg. 205-day adj. wt. ratio	Mgt. code	Avg. frame score	Avg. muscling score	Avg. conformation score	No. of yearlings	Sex	ADG on test	Avg. 365-day adj. weight	Avg. 365-day adj. wt. ratio	Avg. frame score	Avg. muscling score	Avg. conformation score
76	15	520	104	2	3.6	4.5	14.2	4	1	3.00	1070	104	3.7	5	14.5
								4	2	1.65	725	103	3.4	4.5	14.3
77	25	525	103	1	3.5	4.6	14.0	7	1	3.00	1060	103	3.6	4.8	14.4
								6	2	1.55	715	103	3.5	4.7	14.2
								6	3	2.60	915	105	3.6	4.8	14.5

The information on this form is filled in by the herd owner, from the processed Calf Crop Record and the Post-Weaning Record. An up-to-date record should be kept for each bull in the herd.

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**CARCASS QUALITY WORK SHEET**  
**Illinois Beef Performance Testing Program**

Herd code number 001-0001 Name John Doe  
RR #1 Doerillo, Illinois 66643  
 Street or Rural Route City State Zip Code

1. Animal number	X35	X40					
2. Slaughter tag number	5	10					
3. Slaughter weight	1050	1170					
4. Hot carcass weight	656	725					
5. Dressing percentage	62.5	62.0					
6. Fat thickness (in.)	0.9	0.3					
7. Fat thickness per 100 lb. of carcass (in.)	.137	.041					
8. Rib-eye area (sq. in.)	11.0	15.3					
9. Rib-eye area per 100 lb. of carcass (sq. in.)	1.68	2.11					
10. Conformation	P-	C+					
11. Maturity	A	A					
12. Marbling	moderate	small					
13. Quality grade	C+	C-					
14. Kidney, heart, pelvic fat (%)	4.0	2.5					
15. Estimated yield grade	4.5	1.7					
16. Slaughter date	7-3-77	7-3-77					
17. Birth date	4-1-76	5-10-76					
18. Age at slaughter (days)	459	420	This is the form to use when you want to combine the performance records and official carcass evaluation data on slaughtered animals, as well as make additional calculations.				
19. Lb. carcass per day of age	1.43	1.73					
20. 205-day adj. weight	520	601					
21. 365-day adj. weight	930	1040					
22. Sire number	2	4					
23. Dam number	R15	R40					











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